Ministry of Environment

Annual Report for 2016-17

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Government of Saskatchewan

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Letters of Transmittal

Her Honour, the Honourable Vaughn Solomon Schofield,
Lieutenant Governor of Saskatchewan

May it Please Your Honour:

I respectfully submit the Ministry of Environment's annual report for the fiscal year ending March 31, 2017.

The Ministry of Environment largely finds its direction in *The Saskatchewan Plan for Growth*. The ministry follows this vision to secure a better quality of life for everyone in Saskatchewan. This report demonstrates the ministry's ongoing commitment to the province's vision and honours the commitments we made in our *Ministry of Environment Plan for 2016-17*. We hold ourselves accountable to manage and protect Saskatchewan's environment for the well-being of the province, its people and its future. The responsibility to manage expenditures, while continuing to deliver high-quality public service, drives innovation within the ministry.

We mark our progress by the quality of our air, the safety of our communities and the health of all habitats. In 2016-17, we continued to develop the Saskatchewan Environmental Code to provide client-centred service, foster innovation and protect the environment. The ministry supported the economy by protecting ecologically significant landscapes that contribute to our quality of life. Public engagement and consultation informed land management issues from solid waste management to wind energy developments. These and other stories are within this year's annual report.

This report serves as a milestone to mark our journey, and inspires us to aim high as we manage and protect Saskatchewan's environment.

Scott Moe
Minister of Environment

The Honourable Scott Moe,
Minister of Environment

Dear Minister Moe:

I have the honour of submitting the annual report of the Ministry of Environment for the fiscal year ending March 31, 2017.

The ministry's annual report was prepared under my direction in accordance with the government's system of planning, measuring and reporting. I am ultimately responsible for the financial administration and management control of the ministry. All key actions and associated implications contained in this report are, to the best of my knowledge, complete, accurate and reliable.

Lin Gallagher
Deputy Minister of Environment

Introduction

This annual report for the Ministry of Environment presents the ministry's results for the fiscal year ending March 31, 2017. It provides results of publicly committed strategies, key actions and performance measures identified in the *Ministry of Environment Plan for 2016-17*. It also reflects progress toward commitments from the *The Saskatchewan Plan for Growth*, throne speeches and the ministry mandate.

The annual report demonstrates the ministry's commitment to effective public performance reporting, transparency and accountability to the public.

Alignment with Government's Direction

The ministry's activities in 2016-17 align with government's vision and four goals:

Saskatchewan's Vision

"... to be the best place in Canada – to live, to work, to start a business, to get an education, to raise a family and to build a life."

- **Sustaining growth and opportunities for Saskatchewan people**
- **Meeting the challenges of growth**
- **Securing a better quality of life for all Saskatchewan people**
- **Delivering responsive and responsible government**

Together, all ministries and agencies support the achievement of government's four goals and work towards a secure and prosperous Saskatchewan.

Ministry Overview

The ministry's strategic goals are:

Reduced risk and harm from environmental contamination

A clean and safe environment for communities

Productive, resilient and biologically diverse landscapes

Increased regulatory certainty and transparency

High client service satisfaction

Success in achieving the ministry's mandate and outcomes is defined through: excellent air quality, protected landscapes and safe communities, clean and secure water resources, healthy habitats, and economic growth balanced with environmental health.

MISSION	VISION	MANDATE
The Ministry of Environment provides science-based solutions, compliance and mitigation measures aimed at protecting the environment, safeguarding communities and helping to ensure balanced economic growth and a better quality of life for all Saskatchewan residents.	We will manage and protect Saskatchewan's environment for the well-being of the province, its people and its future.	The Ministry of Environment's role is to manage the health of Saskatchewan's environment in a respectful, responsible and enforceable manner that balances growth with sustainable development through objective, transparent and informed decision-making and stewardship.

The ministry consists of the following branches:

Reporting to the Deputy Minister

Communication Services is responsible for correspondence and referrals, legislative services, public and media services, production and freedom of information and protection of privacy.

Wildfire Management plans and delivers forest fire management activities including detection, preparedness, suppression and protection of people, communities and infrastructure. This includes training programs, an aerial firefighting fleet, a radio communications network, meteorological services, public wildfire awareness and educational programs, and out-of-province wildfire assistance when required.

Climate Change Division

Climate Change monitors and reports on the province's greenhouse gas emissions and develops equivalency frameworks to align with federal policy and sectors, including coal-fired electricity legislation. The branch also works with other levels of government to inform a pan-Canadian framework on climate change and co-ordinates work from meetings with provincial and federal governments and international climate agreement conferences.

Resource Management and Compliance Division

Aboriginal Affairs focuses on Aboriginal policy development and implementation, formal arrangements designed to improve relations with Aboriginal peoples, and issues management to reduce conflict with Aboriginal interests.

Compliance and Field Services develops and delivers province-wide compliance and field enforcement programs to protect the environment and manage natural resource use through its team of conservation officers. The branch also provides services to the Ministry of Parks, Culture and Sport and the Water Security Agency through shared-services agreements.

Fish, Wildlife and Lands conserves, manages and ensures sustainable allocation of fish and wildlife populations to maintain healthy biodiversity for the recreational, social and economic benefit of Saskatchewan people. The branch delivers programs such as the Saskatchewan Conservation Data Centre, the South of the Divide project and the Boreal Caribou project through collaboration with partners in industry, environmental non-government organizations, academia and other government agencies.

Forest Service sustainably manages provincial forests through the licensing of forest products and oversight of forest industry planning, harvesting and forest renewal. It collects Crown dues and fees from harvested forest products, monitors and controls damage to forests from insects and disease, renews historically depleted forest lands and provides forest inventory and resource analysis services.

Landscape Integrity develops and administers policies and programs for the management of Crown resource land with the intention to balance healthy ecosystems with sustainable land use. The branch makes Crown land available for use and sale when appropriate by issuing permits and leases and develops and leads land use plans associated with public consultation processes and the *First Nations and Métis Consultation Policy Framework, June 2010*. The branch also responds to Treaty Land Entitlement and specific land claims involving Crown resource lands.

Environmental Protection and Audit Division

Environmental Assessment and Stewardship manages the environmental assessment process, including screening projects that pose significant environmental impacts or have potential for public concern, and also manages waste stewardship and recycling.

Environmental Protection manages programs that focus on mining, industrial and commercial operations, landfills, spills and environmental emergencies, contaminated sites, hazardous substances and waste, and the storage of dangerous goods.

Technical Resources provides scientific and technical leadership and expertise on complex environmental issues, delivers the air quality program, and co-ordinates federal-provincial research and standards development.

Environmental Support Division

Business Transformation Management oversees the development and delivery of modern governance tools including the Saskatchewan Environmental Code. The branch leads the ministry's online business services and is responsible for the long-term strategy for environmental information management and technology services.

Corporate Services oversees accounting, financial services and reporting, internal auditing, budgeting and forecasting, contract advice, mailroom and property management services. In addition, the Client Service Office helps the public with inquiries, applications and land dispositions.

Strategic Planning and Performance Improvement oversees all strategic planning and reporting, risk, performance and business continuity management, as well as workplace safety and continuous improvement efforts.

Progress in 2016-17

Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

Securing a better quality of life for all Saskatchewan people

Delivering responsive and responsible government

How does the Ministry of Environment support the *Saskatchewan Plan for Growth?*
The ministry promotes and regulates responsible development and industrial activity including protection of the environment through environmental assessment, management of industrial sites and compliance activities.

Ministry Goal

Reduced risk and harm from environmental contamination

Strategy

Environmental protection is based on a proactive approach to ensure effective management of the province's natural resources.

Key Actions and Results

Action

Deliver compliance and enforcement programs to mitigate risk to the environment and public safety.

Inspections are used to build relationships and enhance environmental awareness
The ministry conducted 113 inspections at industrial and mining facilities, and 136 inspections at landfills in 2016-17. The number of inspections was lower than in the previous year, as resources were deployed to support the management of a Husky Energy Inc. oil spill near Maidstone, Saskatchewan. There were 73 enforcement actions taken to address issues where organizations were not complying with standards or regulations, ranging from letters to environmental protection orders or charges.

Summary of compliance inspections

Type of inspection	2014-15	2015-16	2016-17
Landfills	132	256	136
Mining/industrial assigned operating facilities	106	123	80
Industrial potable and hygienic water/wastewater	19	16	19
Decommissioned, reclaimed or abandoned mining or industrial sites	11	8	12
Hazardous substances and waste dangerous goods storage and impacted sites	7	19	2
Total number of inspections	**275**	**422**	**249**

Action

Minimize impact of environmental liabilities through financial assurances and compliance audits.

Industry provides financial assurances

The ministry currently holds $872 million in financial assurance instruments for active mining and industrial facilities. Requirements for financial assurances were expanded when *The Environmental Management and Protection Act, 2010* came into force in July 2015. The funds for industrial and commercial activities ensure that economic development proceeds in an environmentally responsible and sustainable fashion. Those directly benefiting from the operation are responsible for providing the financial assurance required to adequately remediate the site, regardless of the willingness and/or economic viability of the company to complete the work.

Action

Prevent pollution through effective management of impacted sites and environmental stewardship.

Growing awareness of new options for liability on contaminated sites

The Saskatchewan Environmental Code, as it relates to management of impacted sites, has been well received and work continues to increase awareness and harmonize requirements. Through the Code, a person who is legally responsible for environmental impacts on a site can now apply for a notice of site condition, which provides relief from future responsibility and legal liability for the site.

Responsible parties have become more aware of liability reduction opportunities, and are conducting corrective actions to place a notice of site condition in the impacted sites registry.

Online registry of impacted sites will help identify potential environmental hotspots

The ministry continues to develop a risk registry that will eventually be available publicly. It will be used to track contaminated sites and monitor risks and potential danger. The database will enable the ministry to proactively deal with new chemicals and emerging environmental situations. Over time, the registry will help predict future risk hotspots.

Action

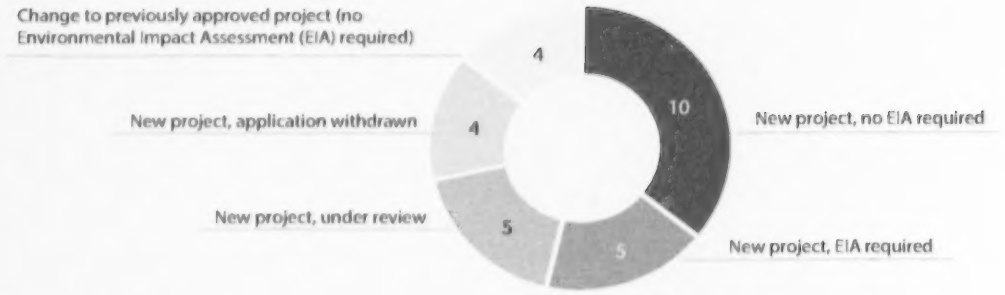
Assess high-risk developments to ensure appropriate mitigation measures are in place.

High-risk projects assessed to reduce ecological footprint

The ministry reviews and assesses new development projects proposed in Saskatchewan to ensure strong environmental and social safeguards are in place prior to approval. This risk-based approach provides environmental safeguards for low-risk projects. High-risk projects are required to complete an environmental assessment to understand the sources and impacts of development and identify potential mitigation measures to address impacts.

In 2016-17, the ministry received 28 applications for review under *The Environmental Assessment Act*. Of these applications, 10 were deemed to be low-risk and proceeded to obtain other required approvals. Environmental assessments were conducted for large-scale wind energy projects, mining activities and peat harvesting.

Environmental assessment applications



Ministry oversees North Saskatchewan River oil spill assessment and cleanup

On July 20, 2016, a fractured pipeline belonging to Husky Energy leaked a significant amount of oil into the North Saskatchewan River, upstream of North Battleford near Maidstone, Saskatchewan. An estimated 225 cubic metres of crude oil blended with condensate was released, and approximately 60 per cent of that was contained on land.

The spill response was overseen by a team involving Husky Energy and the Ministry of Environment. Environment and Climate Change Canada, Water Security Agency and other specialists provided support and guidance. Downstream users were alerted of the spill, and the cities of North Battleford, Prince Albert and Melfort temporarily suspended drinking water withdrawals from the river.

Initial assessment and cleanup involved removing oil near the spill site and on the shoreline. Oil was removed from the river using skimmers and absorbent materials. Teams surveyed and assessed affected areas to assist with effective deployment of cleanup crews. The successful use of specially trained dogs to detect small areas of oil was the first of its kind in Canada.

The event was a test for Saskatchewan's Environmental Code as well. The alternative solution option in the Environmental Code enabled a formal process for approving the use of established marine oil spill standards. The magnitude of this oil spill was unprecedented in Saskatchewan and the ability to use established standards from other jurisdictions provided Husky Energy flexibility in using a science-based approach to comply with requirements.

By the end of September, more than one million hours were logged on the response by approximately 2,630 people, who had recovered approximately 93 per cent of the discharged oil. Activities resumed in spring 2017 to further assess the river and continue clean-up efforts. Husky will continue monitoring, sampling, assessing and cleaning up the river throughout 2017. This will include water and sediment testing, fish and aquatic insect population monitoring, and shoreline re-inspections to verify the effectiveness of the cleanup.

Performance Measures

Percentage of reportable spill incidents in compliance with notification

Increase follow-up compliance on notification

Spills in compliance with notification

The ministry compares yearly rates of compliance with a process required for reportable spills, including discovery of contamination that occurred in the past. Rates in 2016-17 are consistent with the prior year.

94 %
2016-17

Compliance rates

94% 2015-16
70% 2014-15

Public awareness results in more incidents reported

Incident reports increase when there is a heightened public awareness of environmental emergencies. The increase in 2015-16 spill reports was due to the introduction of more stringent reporting standards and a streamlined process. A significant increase in the number of cases can be linked to a heightened awareness to report as a result of high-profile environmental emergencies such as the Husky Energy oil spill. Another factor is the increased communication between the ministries of Environment and the Economy on how spills are reported to both ministries.

Spills by type	2015-16	2016-17
Fixed facility	26%	34%
Historical	44%	24%
Transportation	16%	19%
Other	9%	15%
Pipelines	5%	8%

1,088
2016-17

Reported spills

847 2015-16
769 2014-15
770 2013-14

24 hour
spill control centre
1-800-667-7525

The spill line received **1,088 calls in 2016-17**. Of those reports, 280 did not meet thresholds to trigger action, and **808 required follow-up action**. Of the spills requiring action, 160 were referred to the Ministry of the Economy, Water Security Agency or the Government of Canada.

1,084
2016-17

Applications

811 2015-16

Impacted sites and hazardous substance storage applications

Impacted sites and hazardous substance storage applications are primarily completed using the ministry's online business portal.

Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

Securing a better quality of life for all Saskatchewan people

Delivering responsive and responsible government

How does the Ministry of Environment support *Saskatchewan's Plan for Growth?*
The ministry engages with partners and stakeholders to communicate its vision, goals and progress in achieving results.

Ministry Goal

A clean and safe environment for communities

Strategy

Resources are managed to ensure public safety and environmental sustainability.

Key Actions and Results

Action

Engage the public in developing a solid waste management strategy.

Public invited to weigh in on waste management strategy
To meet the challenges of growth, the ministry is working on a solid waste management strategy that considers how best to divert waste from landfills and manage those landfills. The ministry engaged community stakeholders and First Nations in a conversation with a focus on an overarching long-term framework and short-term actions. A new web page provided access to a discussion paper and feedback tool. In-person and virtual public forums were developed in 2016-17 and subsequently held in April and May 2017. The solid waste management strategy development process will consider contributor input as it proceeds in 2017-18.

Action

Renew wildfire fighting assets to ensure continued ability to protect values at risk with human life and communities as highest priority.

Firefighting aerial fleet primed to protect
The 2016-17 budget included an additional $17.801 million in capital funding to modernize the province's aerial firefighting fleet and upgrade the La Ronge hangar and apron. The newest tanker, a CL-215T built in 2016-17 and delivered in April 2017, allows the ministry to retire an obsolete tanker. The La Ronge hangar upgrades are still underway, including the installation of a fire suppression system to protect the facility.

Saskatchewan's FireSmart Communities

Wildfire can threaten communities, essential infrastructure, commercial timber and other human values. In 2015 wildfires threatened Wadin Bay, which was saved by the combined efforts of FireSmart work accomplished through community volunteer work, and the provincial wildfire response. Napatak, a resort community south of LaRonge, became Saskatchewan's second community recognized under this program in 2016.

The FireSmart program supports partnerships between communities and government with the goal of reducing risks from wildfire. The program is designed to encourage local, self-organized groups of neighbours to implement solutions for wildfire safety by engaging and supporting homeowners, community leaders, and others in a shared effort to protect people and property from wildfire threat.

Understanding what needs to be done beforehand is an important component of being ready when a wildfire comes close to a community. "People don't realize how high-risk early spring is," says Maureen Bingham, President of the Napatak Community Association. "There's no easy access to water and the leaves aren't out yet. There are dry branches and leaves everywhere. The FireSmart program gave us extra knowledge and the incentive to do the work that needed to be done."

Communities partner with government experts and work together to develop and implement vegetation management programs and make community plans that reduce wildfire threat. Identifying hazards and planning for emergencies are essential parts of the program. FireSmart planning and education saves money, increases safety and improves our communities.

The ministry's Wildfire Management Branch continues to reach out to communities so more people can protect themselves from wildfire threat through pro-active partnerships.

Action

Monitor and maintain "good" air quality.

Environmental protection plans maintain high air quality

Saskatchewan has a number of tools available to help keep air quality high. This includes *The Environmental Management and Protection Act, 2010* which calls for an environmental protection plan for every major emissions source in the province. The preparation of an environmental protection plan falls under the Industrial Air Source Chapter of the Environmental Code, introduced on June 1, 2015. Industrial emitters must make sure their operations meet Saskatchewan's air quality standards. This guarantees emissions do not harm air quality, the environment or human health. By January 1, 2020, all Saskatchewan companies that meet the requirements outlined within the Industrial Source (Air Quality) Chapter of the Environmental Code must have a ministry-approved environmental protection plan in place. In 2016-17, the ministry accepted and approved environmental protection plans for eight companies.

Air zone management on solid ground

Air zones are local management areas in a province or territory that develop monitoring programs and infrastructure to provide stakeholders with information they need to understand and address local air quality issues.

In 2016-17, all six Saskatchewan air zones were functioning as non-profit organizations. Two of the air zones, which were the last ones to be incorporated as non-profit organizations, have begun invoicing industry stakeholders to fund business operations such as holding quarterly Board of Director meetings, setting up websites and producing newsletters.

The South East Saskatchewan and Western Yellowhead air zones have had their respective science committees review the regional air monitoring networks and decided to relocate two air monitors in 2017. Annual reports, newsletters and air quality data can be found at sesaa.ca and wyamz.ca. The Great Plains Air Zone set up an air monitoring station in the City of Yorkton in February of 2017, with another site being commissioned in the spring of 2017 near Belle Plaine. Live data is available on gpaz.org.

Action

Increase implementation of wildfire community protection plans to reduce risk of catastrophic wildfire events and reduce the number of evacuations.

Northern communities develop wildfire protection plans

In 2016-17, a number of community protection plans and mitigation projects were completed including five wildfire hazard assessments, two wildfire case studies and 23 fuel management projects. Nineteen of the fuels management projects were possible through federal grants and partnerships between the ministry and Prince Albert Grand Council to secure more than $2 million in funding through Indigenous and Northern Affairs Canada. Along with the 19 mitigation projects (230 hectares thinned) undertaken in First Nations communities, four Community Wildfire Preparedness Plans were developed, and a wide variety of wildfire training courses were delivered.

Wildfire preparedness and prevention recommended as industry standard

New wildfire chapters of the Saskatchewan Environmental Code are in the early stages of development. As with previous code chapters, a committee will be formed to develop content and recommendations based on FireSmart principles over the next two years. Subject to review and approvals, the two chapters will be developed pursuant to *The Wildfire Act* and will apply to sectors such as forestry, oil and gas, mining and exploration, road construction, public utilities, peat moss, railways, outfitting and more.

Performance Measures

Quality of Saskatchewan's air

Air Quality Health Index (AQHI) rating is good or excellent 95 per cent of the time.

In 2016, the AQHI was measured as low-risk more than 95 per cent of the time in five locations with measuring stations: Regina, Saskatoon, Prince Albert, Swift Current and Buffalo Narrows.

The AQHI was developed through a national process and applies across the country. It uses a scale that better helps the public understand what outdoor air quality means to their health. It is especially useful for people most at risk: children, seniors and people with diabetes, heart and lung disease.

The AQHI provides a number from 1 to 10 to indicate the level of health risk associated with local air quality, with 10 being the highest exposed risk. It uses a formula based on ozone, nitrogen dioxide and fine particulate matter as pollutants.

Target for air quality achieved

Average AQHI was low-risk more than 95 per cent of the time.

99%	99%	96%	96%	99%
BUFFALO NARROWS	PRINCE ALBERT	REGINA	SASKATOON	SWIFT CURRENT

Recycling rates

Maintain an 80 per cent recycling rate on beverage containers while optimizing waste recycling in all other recycled materials.

The province continues to recycle more than 80 per cent of deposit-paid beverage containers every year. Recycling rates are an important indicator of the public's commitment to minimizing waste.

SARCAN estimated 412.5 million containers were recycled in 2016-17, a rate of 82.1 per cent.

Saskatchewan's Multi-Material Recycling Program, which launched in January 2016 and enlisted members throughout 2016-17, now has an impressive 487 municipalities participating in the program, representing 86 per cent of the population.

The Saskatchewan Scrap Tire Corporation (SSTC) collected and recycled 806,013 scrap tires in 2016. SSTC has recycled more than 27 million tires since its inception 17 years ago.

The Saskatchewan Association for Resource Recovery Corporation (SARRC) collected and recycled more than 18 million litres of oil in 2016. Also in 2016, SARRC recycled 430,000 kilograms of used oil, antifreeze and diesel exhaust fluid containers. It has recovered 307,527 litres of used antifreeze and almost two million used oil filters. Since its inception in 1996, SARRC has facilitated the recovery and reuse of more than 320 million litres of used oil.

Solid waste management

Decrease non-compliance at municipal landfills.

Landfill compliance rate

The ministry regulates 854 solid waste management facilities located on 700 sites. This includes 328 municipal waste landfills, 15 industrial landfills, 155 transfer stations and 356 closed operations. The ministry maintains an inventory of waste management sites, completes inspections and follows up where landfills are not complying with regulations to maintain public safety and reduce potential impacts to soil, air and water.

In 2016-17, the ministry conducted or issued:
136 inspections | **4** audits | **114** resulting action items | **60** warning letters
46 inspections with action items | **5** warnings of non-compliance | **2** immediate environmental protection orders
4 audit findings | **1** charge

Human-caused wildfires

Reduce the number of wildfires caused by human activity.

Human-caused wildfire

In the mid-1990s, the ministry began a focused program of education, compliance and enforcement aimed at reducing the number of human-caused wildfires in Saskatchewan. Since 1996, there has been a 44 per cent reduction in the average number of human-caused wildfires, despite an increase in human activity on the landscape during the same time period. This downward trend directly correlates with prevention, education and compliance efforts.

Level of risk to community by wildfire

Number of community preparedness plans and mitigation projects completed.

The Wildfire Education, Prevention and Mitigation unit of the Wildfire Management Branch has three main goals: to reduce the number of unwanted human-caused wildfires, to build awareness and capacity around wildfire risks, and to mitigate wildfire risk to communities and other valuable property and infrastructure. The unit helps deliver the wildfire awareness campaign, and provides FireSmart advice, training and recommendations to stakeholders. The unit also manages the community wildfire protection program where it consults, plans and co-ordinates fuel management projects for community protection from wildfire.

Community preparedness plans developed for extreme to medium risk communities*

** based on a baseline of 86 communities out of 104 that were assessed as having extreme to medium risks*

Wildfire mitigation projects			
Year	**# of projects**	**Cost***	**Area thinned (ha)**
2016-17	18	$2,040,235.00	227.3
2015-16	18	$3,633,486.00	213.46
2014-15	2	$97,888.50	15.23
2013-14	6	$84,847.50	10.65
2012-13	2	$80,602.80	8.99

Note - Wildfire mitigation projects *may* be undertaken based on information gathered in Community Preparedness Plans but are not tied to the same risk assessment baseline. They are selected based on a range of additional factors.

*Federal grants administered through Prince Albert Grand Council are included.

Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

Securing a better quality of life for all Saskatchewan people

Delivering responsive and responsible government

How does the Ministry of Environment support *Saskatchewan's Plan for Growth?*
The ministry adopts a cumulative effects approach to environmental management by taking into account the combined effects of past, present and foreseeable human activities over time on the environment, economy and society in a particular place.

Ministry Goal

Productive, resilient and biologically diverse landscapes

Strategy

The ministry promotes sustainable use and allocation of natural resources.

Key Actions and Results

Action

Develop and implement a land use planning process that informs development and resource allocation.

Assessment of the existing land use planning processes
The ministry initiated the first phase of a detailed review of existing approved land use plans to identify key values, issues and recommendations. This review will be considered in ministry strategic planning discussions once the review is completed in 2017/18.

Action

Maximize sustainable allocation and harvest of natural resources.

Timber harvest has room to grow
Saskatchewan's forest industry has room to grow. In 2015-16, which is the latest available data, the Saskatchewan forestry industry harvested 44 per cent of the annual allowable cut which was set at 8.2 million cubic metres of timber. This translates into an estimated 3.7 million cubic metres of timber, or approximately 70,000 loaded logging trucks.

The annual timber harvest is an important indicator of the state of northern Saskatchewan's forest industry and economy. The ministry uses the annual allowable cut to measure the sustainability of forestry practices in the province and to guide policies regarding the expansion of the forestry manufacturing base. Saskatchewan is particularly sensitive to changing commodity prices in softwood lumber, plywood and chipboard, which can impact harvesting activity.

Pasquia-Porcupine forest management area plan approved

A 20-year plan is an extensive undertaking that takes years to develop and involves numerous stakeholders, First Nations and Métis communities working together to define a future vision and path forward. The *2015-2035 Pasquia-Porcupine Forest Management Plan*, approved by the Minister on May 31, 2016, is the first plan under the amended *Forest Resources Management Act* which eliminates the need for dual approvals under *The Environmental Assessment Act*. The plan sets long-term strategic direction for managing forest resources on the licence area, following the guiding principles of ecosystem-based management and helping to ensure the sustainability of Saskatchewan's forests for future generations.

Action

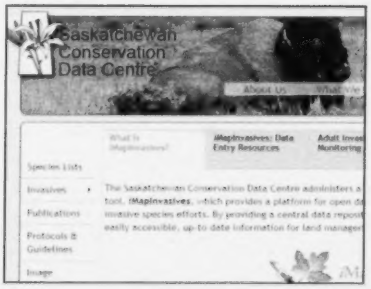
Develop a framework to improve co-ordinated provincial responses to health issues that link humans, animals and the environment.

Hunters help province detect Chronic Wasting Disease

Saskatchewan relies on hunters to help monitor for Chronic Wasting Disease (CWD), as all suspected cases must be reported to the Canadian Food Inspection Agency. Testing of harvested deer, elk and moose is available to hunters for free. This effort is a collaboration between the ministries of Agriculture, Health and Environment to ensure a co-ordinated government response to health issues at the interface of wildlife, domestic animals and humans. The goal is to create a common understanding of risks, and to develop preparedness plans to ensure public safety. In 2016-17, the province tested 396 animals and CWD was identified in 49 (12 per cent).

Action

Deliver and explore opportunities for expanding integrated environmental monitoring and management.



Improved access to environmental data helps inform decisions

The Saskatchewan Conservation Data Centre (SKCDC) continues to provide timely and accurate environmental data to help support species inventory and monitoring initiatives. The SKCDC gathers, interprets and distributes standardized information on the ecological status of provincial wild species and communities. In 2016-17, SKCDC staff completed a general status review of approximately 9,000 species, mapped 11,411 features of conservation significance for tracked species, and completed surveys to verify species occurrences for snapping and painted turtles, ferruginous hawks, kangaroo rats and a rare Saskatoon berry species. The SKCDC also hosted international experts delivering a workshop on moonwort ferns, and worked with Saskatchewan Polytechnic to assess kangaroo rat habitat in Saskatchewan.

Monitoring efforts ensure we understand the true state of wild species in Saskatchewan. Up-to-date inventories help inform development decisions, address federal species at risk requirements (e.g. *Emergency Order for the Protection of the Greater Sage-Grouse*) and support long-term hunting and fishing activities.

Surveys and inspections are important monitoring tools
Research permits issued by the ministry for academic research and species detection surveys are an important tool for supplementing biodiversity information gathered by the Saskatchewan Conversation Data Centre. Information gathered from these permits helps inform government decisions and monitor changes in the landscape. Developers are required to conduct species detection surveys to minimize impacts to rare and sensitive species and habitats.

In 2016, the ministry issued a total of 16 research permits for academic research, and 141 permits for species detection surveys. More than 34,000 animal and 5,000 plant observations from species detection surveys were submitted. Species observations are available on the Hunting, Angling and Biodiversity Information of Saskatchewan (HABISask) website.

Watercraft inspected for aquatic invasive species
The ministry advanced efforts to prevent aquatic invasive species from entering Saskatchewan. In 2016-17, the province inspected 776 watercraft for invasive mussels, and decontaminated 25 vessels. Two of the decontaminated boats had visible mussels attached that were later confirmed to be dead. No evidence of establishment was found in the 80 waterbodies monitored for the presence of invasive mussels. In 2015, the province enhanced regulations to improve inspection of high-risk watercraft entering the province to protect fish populations and aquatic habitats from the spread of invasive species.

Aquatic invasive species such as zebra and quagga mussels pose a serious threat to lakes and waterways. Invasive species have the potential to severely impact aquatic habitats, recreational and commercial fisheries, and water-based infrastructure. Prevention is the most effective way to control their spread, and the province has initiated a number of programs to combat these alien invaders.

Action
Develop range plans to protect woodland caribou populations and habitat as required by the federal *Species at Risk Act*.

Progress on woodland caribou range assessment and planning
The ministry continued work to understand the complexities of the province's woodland caribou population, a federally protected species at risk. In 2016-17, an interim report on the woodland caribou population indicated a stable to slightly increasing population in the boreal shield. Efforts to protect woodland caribou populations and habitat focused on range planning in 2016-17.

In May 2016, the ministry launched range planning meetings in the West Boreal Plain, including an introductory session on the program, caribou biology and habitat requirements during their lifecycle. Meetings have included representation from industry, non-government organizations and municipalities, as well as First Nations and Métis communities.

Saskatchewan is on track to submit a range plan to Environment and Climate Change Canada in October 2017 for the Central Boreal Plain. Work is complete on range assessment and research, including Aboriginal traditional knowledge, population genetic analysis and legislative review.

Action

Maintain productive and biologically diverse forests through renewal and protection from invasive insects and diseases.

Monitoring key to controlling mountain pine beetle

Mountain pine beetle is the greatest pest risk to sustainable forest development in Saskatchewan. The ministry's strategy is to contain the outbreak in Cypress Hills Interprovincial Park (CHIPP) and slow the spread of mountain pine beetles into the province's northwest forests from Alberta. Early detection and a rapid, aggressive response is the ministry's current approach. The ministry also invests in research to understand the impact to Saskatchewan as the beetle spreads out of its native Lodgepole pine habitat into new environments and a new host tree, jack pine.

In 2016-17, aerial and ground surveys of the CHIPP area identified 187 trees for removal. This is approximately 73 fewer trees than in 2015, and the third straight year of declining removal numbers in the park. This demonstrates that the control program is showing positive results.

Mountain pine beetle continues to spread across north-central Alberta. The leading edge of the beetle's advance is detected by baiting trees with pheromones to attract beetles that are in the area. In 2016, mountain pine beetles were found at four new sites on the Alberta side of the Cold Lake Air Weapons Range, east of the 2015 detections and just 50 kilometres from the Saskatchewan border.

No mountain pine beetles have been found in Saskatchewan's northern forest.

Performance Measures

Number of hectares in the Representative Areas Network

Maintain Saskatchewan's commitment to conserve representative and unique landscapes.

Protected landscapes help maintain biodiversity

The province is committed to working collaboratively with the ministers responsible for Environment and Climate Change Canada and Parks Canada to expand Canada's system of protected areas and conserve biodiversity. The Representative Areas Network (RAN) in Saskatchewan contributes to the national target of conserving 17 per cent of Canada's terrestrial areas and inland waters by 2020.

Saskatchewan remains committed to its target of conserving 12 per cent, or 7.8 million hectares, of the province's terrestrial areas and inland waters. Gains were made in the RAN through the addition of Fish and Wildlife Development Fund lands and private conservation lands. RAN maintains the integrity of biologically diverse areas, protects wildlife habitat and preserves ecological resources, areas of high scenic value and unique physical features.

Conservation land 2020 target

7.8 million hectares

2016-17 RAN

6.2 million hectares

Percentage of forest renewal following timber harvest

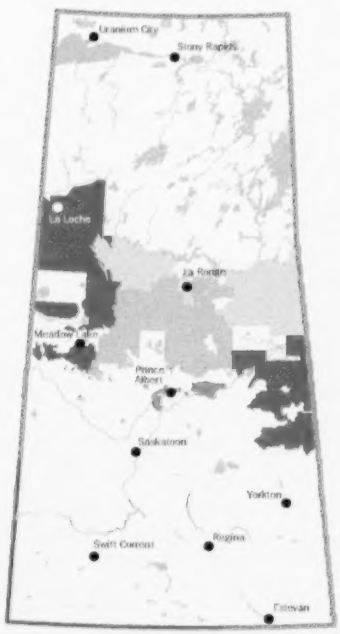
Sufficiently regenerated area status to be 100 per cent.

A sustainable forest economy is not possible without a healthy forest. The long-term health of our forests depends on regrowth after natural disturbances or harvesting. Forests that are not renewed quickly lose their commercial value. That hurts northern communities and the northern economy. Forests that are not renewed properly may also become ecologically different than forests found in the natural landscape.

Forest companies are required to make sure the areas they harvest are renewed and the Government of Saskatchewan routinely checks on industry reforestation efforts. Companies must follow the standard outlined in Saskatchewan's Environmental Code, which includes conducting a survey between four and seven years after harvest, and again between eight and 14 years. If regeneration is found to be lacking, the company must develop a plan to fix the problem.

About 95 per cent of forest land harvested in Saskatchewan from 2004 to 2015 has been successfully regenerated. This success rate varies across forest management agreement areas.

Forest management areas by regeneration percentage



- 99% or more regenerated
- 95% - 98% or more regenerated
- 89% - 94% or more regenerated
- 67% regenerated

Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

Securing a better quality of life for all Saskatchewan people

Delivering responsive and responsible government

How does the Ministry of Environment support *Saskatchewan's Plan for Growth?*
The ministry provides regulatory certainty through the use of recognized standards for informed decision-making to promote responsive and efficient regulations for a sustainable, competitive and diverse economy.

Ministry Goal

Increased regulatory certainty and transparency

Strategy

Decision-making is supported by a culture of innovative thinking, partnerships, high-quality science and data and a robust, risk-based approach presented in a manner understood and broadly acceptable to the public.

Key Actions and Results

Action

Design and deliver policies, programs and standards to ensure regulatory requirements are competitive, current and aligned with the ministry's results-based objectives.

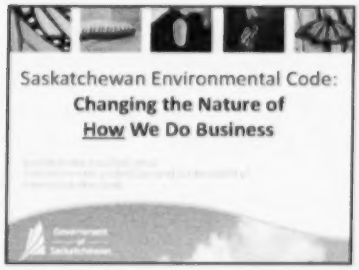
Amendments to forestry legislation ensure fees cover cost of reforestation
Improvements to *The Forest Resources Management Act* came into force in November 2016 and include:

- a more streamlined and flexible process to ensure rates cover changes in reforestation costs;
- new abilities to form partnerships to address abandoned forest roads and trails;
- enhanced requirements for long-term forest management plans for area-based term supply licence holders;
- specific timelines in new forest management agreements for completing forest management plans;
- holding licensees accountable for the actions of their contractors; and
- licence prohibitions where there is a history of non-compliance.

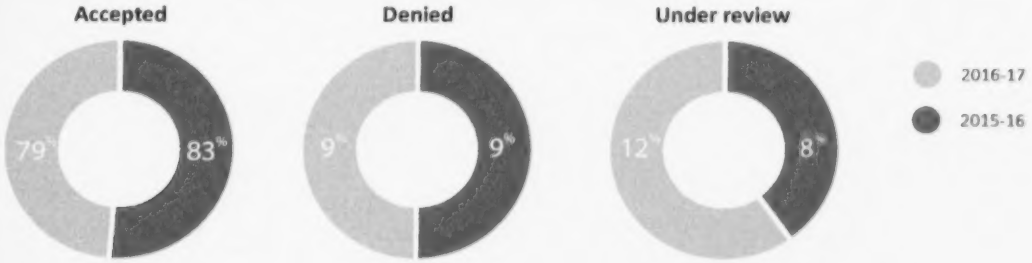
Saskatchewan's new *Provincial Lands Act, 2016* proclaimed
On March 13, 2017, Saskatchewan proclaimed the new *Provincial Lands Act, 2016*, which will improve client service delivery and enhance environmental protection. *The Provincial Lands Act, 2016* is jointly administered by the Ministry of Environment and the Ministry of Agriculture, and had been largely unchanged since its introduction in the 1930s. Adopted on March 13, 2016, the Act is modernized, easier to understand and is more consistent with Crown land management decision-making. Key amendments include enhanced compliance provisions, which will help to ensure provincial Crown lands are well-managed and protected from misuse, trespass and negative environmental impacts. These revisions also ensure effective and efficient client service related to management of provincial lands. Updates to the legislation and regulations reflect input from an in-depth consultation process with lessees, stakeholders, First Nations and Métis communities held in 2013 and 2016.

Environmental Code promotes alternative solutions

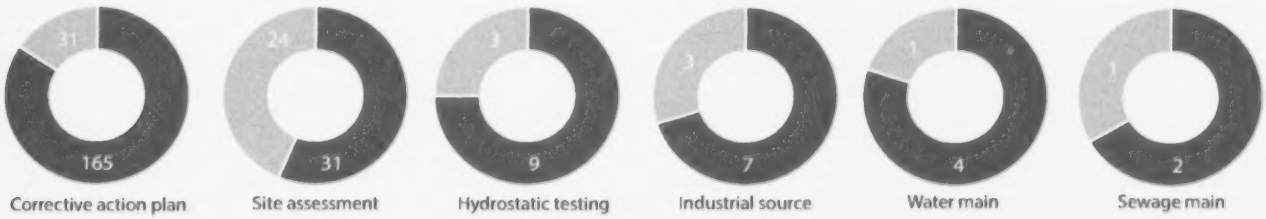
The Saskatchewan Environmental Code continues to provide regulatory clarity to enhance environmental protection and resource management, while fostering innovation, economic growth and social benefits. Solutions to environmental protection and natural resource management are often site-specific and non-standardized. The code allows proponents to develop and propose innovative solutions that may be new to Saskatchewan or unique to particular circumstances. Proponents are free to develop alternative solutions for their activity, while still complying with applicable acts, regulations and the code. Preliminary work has started on a second edition of the code.



Environmental Code - acceptance of proposed alternative solutions



Environmental Code - qualified person applications



Action

Advance Saskatchewan's climate change strategy with a focus on regulatory certainty, technological innovation and environmental resiliency.

Wind energy development guidelines

Saskatchewan has a tremendous wind energy resource with the potential to reduce the province's greenhouse gas emissions from electricity generation. Wind energy also produces power without air or water pollution. In 2015, the Government of Saskatchewan announced a target of 50 per cent renewable energy generation capacity by 2030, with a focus on wind energy.

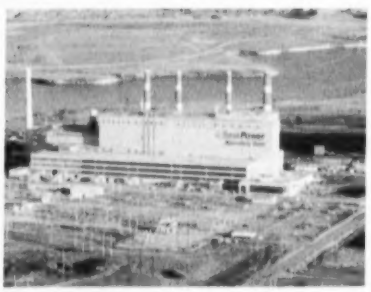
All energy sources, including wind, carry some degree of environmental risk. In August, 2016, the ministry released the *Wildlife Siting Guidelines for Saskatchewan Wind Energy Projects* to support responsible development of wind energy in the province. The ministry worked with industry and environmental stakeholders, including SaskPower, to develop a set of guidelines to assist wind energy developers in site selection to limit potential impacts to wildlife and protect biodiversity. Important issues including wildlife collisions with turbines, and habitat loss and disturbance, are key components of the new guidelines.

As wind energy projects increase, the Ministry of Environment will work with developers to ensure that sensitive areas are avoided through good planning. Innovation and the development of best practices for the province will be encouraged to maximize power production while minimizing environmental impacts. The guidelines have been designed to enhance environmental protection by clearly identifying avoidance areas for wind energy developers. A five-kilometre buffer zone has been established around designated environmentally sensitive areas such as national and provincial parks, ecological reserves, important bird areas and key Saskatchewan rivers. The siting guidelines will help industry minimize environmental risks, including habitat and wildlife impacts, and improve approval processes.

"CanWEA is encouraged that the Ministry of Environment, under the leadership of Minister Moe, has produced a results-based document that provides guidance for the wind energy industry as it works to limit impacts on biodiversity throughout the province, while working to meet the provincial commitment to 30 per cent wind generation capacity," said Robert Hornung, President of the Canadian Wind Energy Association.

Technological innovation highlighted in provincial approach to climate change

The province continues to support Canada's commitment of reducing greenhouse gas (GHG) emission levels by 30 per cent below 2005 levels by 2030. On October 18, 2016, the province released the *Saskatchewan White Paper on Climate Change*. This paper reflects Saskatchewan's commitment to take responsible action on climate change by addressing GHG emissions through technological innovation.



In November 2016, Saskatchewan signed an equivalency agreement in principle with the Government of Canada for coal-fired electricity emission reductions. This agreement will allow SaskPower to focus on finding cleaner sources of energy, such as carbon capture and storage and renewable energy capacity, to reduce GHG emissions from the electricity sector. The agreement will support SaskPower as it moves towards 50 per cent renewable energy capacity in its generation mix by 2030. The technical work to finalize the agreement is underway and is expected to be completed in 2017.

The ministry continues to work within the pan-Canadian framework for clean growth and climate change. These efforts help design responsible mechanisms to reduce GHG emissions.

50%
renewable energy by 2030

The ministry participates and advances Saskatchewan's position on climate change on the following committees:

- Offsets Project Team;
- GHG Emissions Reporting and Inventories Project Team;
- Emissions Projections Project Team;
- International Mitigation Project Team;
- Adaptation Committee;
- National Fuel Standard Project Team; and
- Natural Gas Performance Standards Project Team.

Action

Enhance the use of data, modelling and technology for making informed decisions.

Modelling modernizes decision-making

The Ministry of Environment is using modelling techniques to modernize land cover information for southern Saskatchewan. Remote sensing-based modelling of the Prairie Landscape Inventory (PLI) will differentiate native grasslands from tame grasslands. These models will provide an accurate, detailed land cover layer for the province, which will deliver the ability to: identify sensitive or rare landscapes across the southern part of the province, guide conservation land acquisition by government and external partners, and provide industry with information for site development. Modelling of these grasslands can also contribute to development of a more accurate predictive species distribution model for species management.

Predictive species occurrence models were completed in the Prairie and Parkland region of the province for 25 tracked wildlife species. Predictive models for more than 70 songbirds in the boreal forest of Saskatchewan have also been acquired from the Boreal Avian Modelling (BAM) Project. The BAM Project, which spans the boreal forest across Canada, was created to develop the best predictive bird-habitat models possible from existing data, with the goal of meeting immediate conservation needs and informing future environmental monitoring initiatives. Predictive models allow for accurate mapping of species, even in areas where detailed surveys have not been completed.

All modelling information is prepared for display and access on HABISask, Saskatchewan's online mapping tool that contains biodiversity information to assist government and clients in making sound resource and land use decisions.

Action

Ensure transparent processes are accessible by all stakeholders through online services.

Online services continue to expand

The Ministry of Environment expanded online service delivery in 2016-17 to provide stakeholders with access to ministry services. Application systems for wildlife research and species detection permits, competitive fishing event notifications and licensing submissions are now available online.

Action

Deliver streamlined service for environmental assessments of new and expanded developments.

Federal environmental assessments under review

The ministry continued to lead the province's review of proposed changes to federal environmental assessment requirements in 2016-17. The goal is to ensure that provincial interests are considered by the federal government in decision-making, including engagement with internal and external stakeholders, First Nations and Métis communities.

Action

Conduct assessments, audits and enforcement activities to ensure compliance with environmental standards and legislation.

Audits verify environmental compliance

Audits are conducted to ensure regulated entities comply with Saskatchewan's environmental acts and regulations. Auditees are selected based on risk factors, including impacts on the environment, health and safety, compliance history, maturity of internal environmental management programs and other factors. In 2016-17, the ministry completed 25 compliance audits on industrial and mining facilities, public and private landfills, and water and sewage treatment plants.

Performance Measures

Hunting, angling and trapping licence online transactions

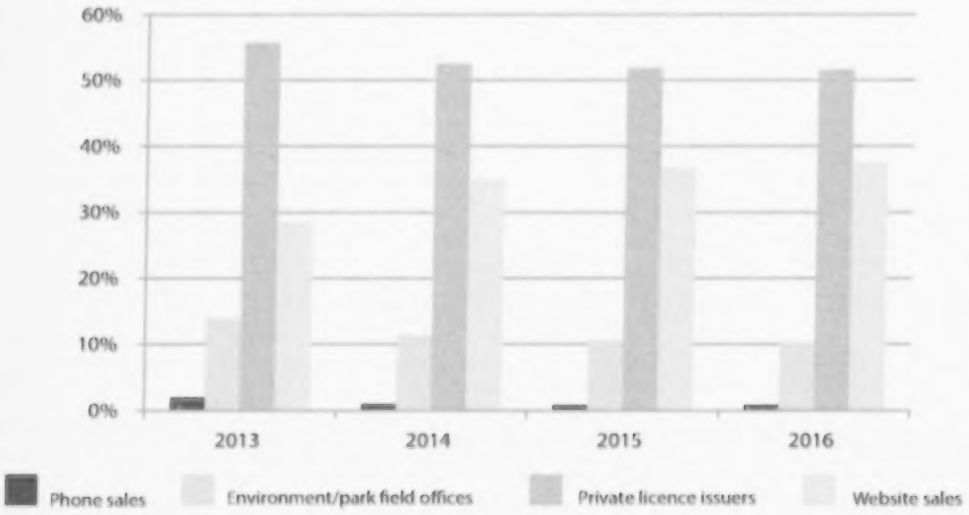
Increase proportion of online hunting, trapping and angling transactions.

Online sales remain top transaction for another year

Online Hunting, Angling and Trapping Licence (HAL) sales are increasing as a percentage of total licence sales each year. In 2016-17, the ministry sold 161,608 licences through website sales, an increase of 6,077 from 2015-16. A total of 430,583 licence applications were processed. The total number of hunting and angling licences in Saskatchewan fluctuates year-to-year, and typically stays between 400,000 and 500,000 purchases annually. The total share of online licence sales has increased steadily as Saskatchewan residents become more comfortable and familiar with the online service.

Online sales surpassed private licence issuers as the purchase method of choice in 2016-17. The percentage of total sales requiring a ministry employee to oversee the transaction, either by phone or through a ministry or park office, now represents less than 10 per cent of all sales transactions. This demonstrates a positive step towards a client self-service model and a simplified, streamlined approach to licence purchases.

Percentage of total online sales



Sustainable timber harvest: percentage of annual allowable cut harvested

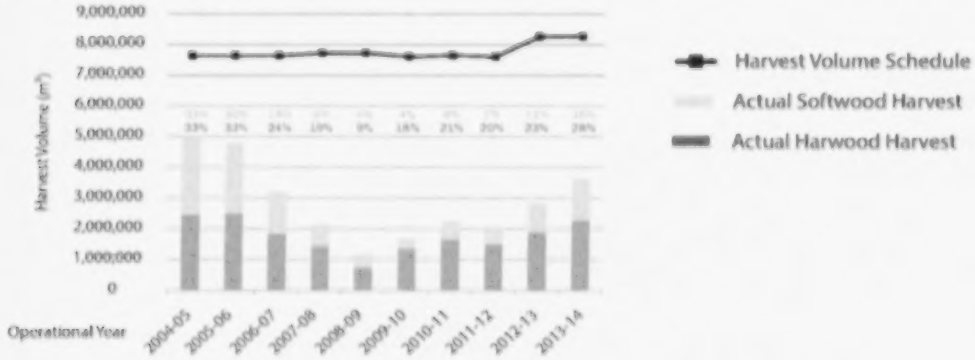
Harvest does not exceed annual allowable cut

Timber harvest management contributes to sustainable provincial forests

The available volume of timber in Saskatchewan has remained relatively constant over the past 10 years. Between seven and eight million cubic metres of timber has been allowed to be harvested each year, during this period. The amount of wood removed depends on a number of factors, including quality, transportation costs and the availability of needed infrastructure.

The annual timber harvest in Saskatchewan has been far less than what is allowable in recent years. Low harvest levels are the result of depressed prices and the global recession. Recently, harvest levels have been increasing, as the forest sector rebounds. For 2015-2016, the most current data available, Saskatchewan's total harvest volume was 3.7 million cubic metres, or 44 per cent of the annual allowable cut.

Saskatchewan Harvest Volume Schedule and Actual Harvest (Total)



Government Goals

Sustaining growth and opportunities for Saskatchewan people

Meeting the challenges of growth

Securing a better quality of life for all Saskatchewan people

Delivering responsive and responsible government

How does the Ministry of Environment support *Saskatchewan's Plan for Growth?*
The ministry delivers effective programs and services through a values-based work culture with highly-skilled and knowledgeable employees.

Ministry Goal

High client service satisfaction

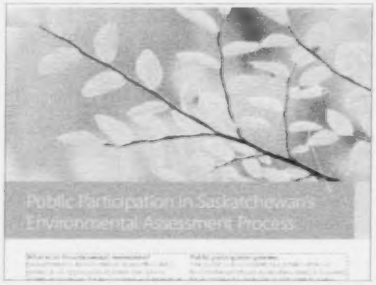
Strategy

Work with clients internally and externally to develop innovative policies, programs, governance models and regulatory initiatives to ensure the environment is managed for the broadest possible public benefit.

Key Actions and Results

Action

Develop and implement a ministry stakeholder engagement strategy that is client and community focused to manage engagement and communications in a timely manner.



Environmental assessments to enhance public engagement
In order to improve the public participation experience in environmental assessments, the Ministry of Environment collaborated with the Ministry of the Economy to develop guidance for industry when engaging with the public on project proposals. A public engagement strategy for environmental assessment will be implemented on upcoming projects in 2017-18. The guidance document will be adopted for other Ministry of Environment activities to improve overall public engagement results.

Action

Optimize relationships and resources to achieve ministry and government outcomes; sustain and maintain resources and monitoring networks through proponents, universities, NGOs and other government agencies to integrate information and determine effectiveness of resource management actions.

Fish and Wildlife Development Fund thrives on partnerships
The Fish and Wildlife Development Fund is a special purpose fund the ministry uses to support habitat protection and management. In 2015, responsibility for the day-to-day management of the fund, and acquisition of wildlife lands, was transferred from the ministry to the Saskatchewan Wildlife Federation, Ducks Unlimited Canada and Nature Conservancy of Canada in 2015.

The fund uses 30 per cent of the revenue from all fur, angling and hunting licences purchased in the province to manage, preserve and enhance fish and wildlife habitat. Some of the supported projects include the international piping plover survey, publications such as the Saskatchewan Bird Atlas and the Flora of Saskatchewan, and a wide range of research on wild boar, mule deer, snakes and turtles. Funds are also awarded to university students who are advancing fish and wildlife-related science.

Refer to the Financial section of this report for more about the fund.

Action

Ensure the ministry and its clients have access to information and resources to support informed decision-making.

HABISask: a new online mapping tool

Residents and organizations have a new way to explore the natural world in Saskatchewan: on your computer, phone or tablet. Launched online on November 8, 2016, HABISask brings the hunting, angling and biodiversity information of Saskatchewan together in a single online mapping tool.

"HABISask has something for everyone, whether you're planning a hunting or angling trip, or looking for the best bird-watching spots," says Darrell Crabbe, Executive Director of the Saskatchewan Wildlife Federation.

The ministry has always relied on spatial information for decision-making. In the old days it was hand-drawn maps, but now it's through high-tech computer programs. HABISask is a window to massive amounts of information about Saskatchewan's natural resources, and helps the ministry quickly assess project submissions and identify conservation gaps and opportunities throughout the province.

HABISask is a province-wide spatial service for the Government of Saskatchewan, individuals, Indigenous organizations and communities and businesses. Providing a central data warehouse, and an accessible way to view that information, is part of our commitment to help advance the province while sustaining our environment.

The ministry is committed to balanced development and environmental sustainability through this new and accessible central data warehouse.

New HABISASK maps

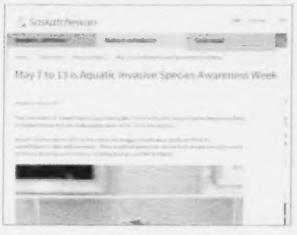
Hunting: wildlife management zones, game preserves, road corridor game preserves, wildlife refuges, bird sanctuaries, wildlife biologist management areas and ministry field offices.
Angling: waterbody locations, fish species presence, fish stocking history, special regulations, underwater depth map, fisheries management zones, fisheries biologist management areas and ministry field offices.
Project screening: rare and endangered species and ecological protection districts.
Wildlife: managed areas, the Saskatchewan Bird Atlas and ecoregions.

Ministry responds to public information needs and expectations

The ministry increased its volume of news releases, social media presence and freedom of information responses in 2016-17 to better meet the information needs of Saskatchewan residents. Reduced media inquiries and interviews may be partially attributable to these efforts, as an indicator that communities were already receiving the information they need about the ministry's policies and programs.

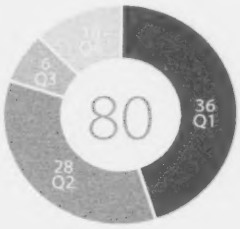
News releases in 2016-17 focused on fines for illegal hunting and outfitting, hunting and fishing regulations, aquatic invasive species prevention and general environmental regulation changes. A complete list is available in Appendix G.

Service	2015-16	2016-17
Total freedom of information requests received	326	568
Inquiries received from media outlets	551	354
Interviews provided to media outlets	288	227
Government of Saskatchewan Twitter posts related to Environment	39	80
Government of Saskatchewan Facebook posts related to Environment	35	64
Ministry of Environment news releases	28	46

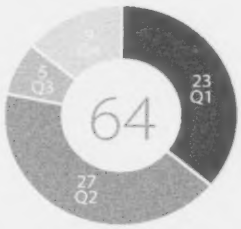


The ministry significantly increased its presence on Government of Saskatchewan social media in 2016-17. This is partially due to increased demands for information related to an oil spill as well as increased efforts to communicate with residents about environmental policies and programs.

Social media



Twitter@SKgov



Facebook @SKgov

Ministry of Environment inquiry line

The Ministry of Environment inquiry line answered 11,743 phone calls in 2016-17, resulting in 10,280 cases related to a variety of subjects.

Number of inquiries by subject	
Regulations, policy, planning, permits	2,095
Hunting and angling licences	2,053
Other agencies	1,014
Big game draw	924
Fish and wildlife	802
Environmentally-impacted sites	757
Land management and protection	617
Online services portal	458
Waste management	440
Ministry of Environment programs and website	375
Forest	214
Wildfire	165
Aboriginal/Métis relations and Treaty rights	132
HABISask	80
Saskatchewan Environmental Code	72
Air quality, management and protection	44
Environmental assessments	32
Other	6
TOTAL	**10,280**

All client inquiries were resolved; the majority of inquiries (69 per cent) were answered immediately upon first contact. Thirty one per cent were referred to the relevant content area for resolution.

Action

Work with partners to increase environmental literacy through training, education and outreach.

Teachers become students to bring forest education to classrooms

Teachers became students in August 2016, as a dozen Saskatchewan educators learned about forest management and ecology during the Ministry of Environment's third annual teacher's forestry tour. The three-day tour gave teachers from all grade levels a first-hand look at natural forest disturbances such as wildfire and wind, how the forest ages and how forest management works.

Elizabeth Thacker, kindergarten teacher at Connaught School in Regina, was part of the tour.

"Teaching kindergarten, I try to include as much outdoor education as possible," Thacker said. "I take the students outside, and we'll do patterns with pine cones and leaves, incorporating the knowledge from the tour."

Thacker said the helicopter and sawmill tour were particularly valuable.

"First, we went to a harvest block and watched where the trees are cut," Thacker said. "Then we went to the mill and followed the process from log to two-by-four, and how it goes from forest to usable materials. Being in the forest and having someone show us different plants and trees was a really unique experience."

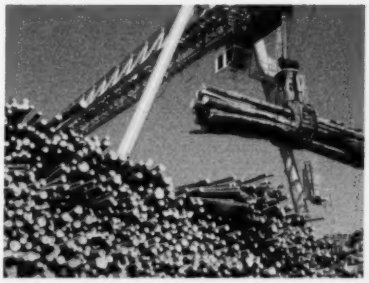
In addition to learning about the science behind sustainable forest management, teachers had an opportunity to view the forest from a variety of perspectives, including First Nations. Tour stops include wildfire and wind-damaged areas, an active harvesting operation and reforested sites. A highlight was the chance for a birds-eye view of natural forest patterns from a helicopter.

"I highly recommend it," Thacker said. "If you like being outside and you want a once-in-a-lifetime experience, this is the professional development for you."

Performance Measures

Business transactions completed online

Increase online business transactions to 80 per cent of all permits/business completed online by 2020.



New online service more efficient for harvested wood measures

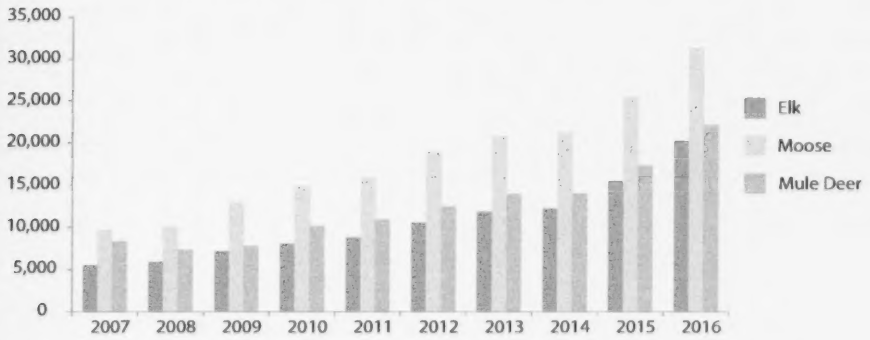
The ministry continued to move away from paper-based transactions and towards a more efficient online business model in 2016-17. This included progress on a new online system for forestry clients, the Scaling Information Management System (SIMS). The objective of the SIMS initiative is to centralize the collection, calculation and reporting of wood measurement information used by industry and government as part of regulatory modernization linked to the Environmental Code.

Most of the features of the new service were implemented on March 24, 2017. Full implementation in 2017-18 will decrease processing time for requests and service delivery.

Big game draw grows online

The provincial draw for big game hunting licences was administered through the online Hunting, Angling and Trapping Licence (HAL) System again in 2016-17 as a transparent and equitable method for allocating a limited number of licences to residents. HAL allows users to submit, review and update their applications, check their pool status history and purchase new licences. Customers can also verify their residency status online. The move online streamlines and simplifies the big game draw process. In 2016-17, 100 per cent of big game draw applications were made online.

Number of applicants for three most popular big game draws



The most popular animal in the big game draw was again moose with 31,392 applications made for 5,890 draw licences, an increase of 23 per cent from the previous year. Pronghorn antelope received 47 per cent more applications in 2016-17 than the previous year.

Demand was also high for antlerless mule deer with 7,754 draw licence applications submitted, a 41 per cent increase from 2015-16.

Number of collaborative initiatives to achieve outcomes

Increase ministry efforts to engage and collaborate with stakeholders.

Engagement and consultation at the heart of projects

The ministry made strides in 2016-17 to engage directly with stakeholders, First Nations and Métis communities on key priorities. Development of a solid waste management strategy and an environmental assessment public engagement strategy pilot project are examples of public engagement on major projects that could potentially impact landscapes and wildlife habitat in the province. Other examples include the introduction of wildlife siting guidelines for wind energy projects and the Husky Energy oil spill response where collaboration with industry and environmental stakeholders was crucial to ensuring a clean and safe environment for communities. Collaboration and public engagement are an integral part of the ministry's commitment to continuous improvement.

Conservation officers meet with outdoor enthusiasts new to Canada

The ministry provided hunting and fishing education and awareness training to new Canadians in 2016-17. The increase in immigration to Saskatchewan has created a new audience for environmental compliance communication. In November 2016, conservation officers delivered an information session attended by approximately 120 people from more than a dozen countries of origin. Saskatchewan's incredible outdoor opportunities are appreciated by newcomers, as evidenced by the robust attendance. Immigrants to Canada come from a variety of cultures and backgrounds and may not be familiar with licences and conservation laws. The session was held in Saskatoon for the second year in a row.

Financial Overview 2016-17

The ministry's approved appropriation for 2016-17 was $175.2 million. Total 2016-17 expenditures were $171.007 million, a variance of $4.2 million from the ministry's approved estimate. This under expenditure was mainly due to project and contract delays and operational and vacancy savings.

The ministry's budgeted revenue was $54.9 million for 2016-17. Actual revenue recorded by the ministry in 2016-17 was $61.4 million. This variance of $6.4 million was primarily due to recovery on wildfire incidents from the previous fiscal year, Husky Energy billing, SaskPower carbon credit and recovery from the Water Security Agency.

The Ministry of Environment is responsible for the Fish and Wildlife Development Fund and the Impacted Sites Fund. Explanations and financial statements for these funds are found on page 37 and 38 respectively.

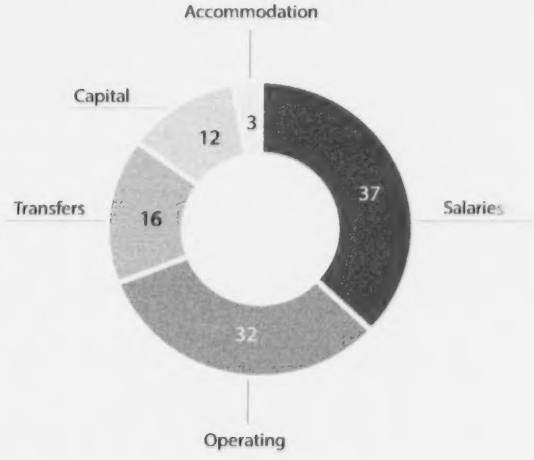
In 2016-17, the ministry maintained 43 district offices in communities throughout the province. The ministry's full-time equivalent (FTE) budgeted allocation was 865.4. The actual FTE utilization was 851.9, a variance of 13.5 FTEs, due to vacancy adjustments.

Expenditures

The ministry's appropriation for 2016-17 was $175.2 million, including projected capital expenditures of $25.0 million. The ministry's total expense budget (excluding capital asset acquisitions) for 2016-17 was $161.4 million, including an amortization budget of $11.2 million. The total 2016-17 actual expenses were $162.1 million, a variance of $0.7 million from the estimate.

The following chart illustrates the allocation of the ministry's 2016-17 actual expenditures between the various cost categories.

Actual expenditures as a percentage



Allocation of the ministry's actual and budgeted expenditures by subvote and subprogram

	(in thousands of dollars)				
	2015-16 actual expenditures	2016-17 original estimates	2016-17 actual expenditures	2016-17 variance	
Subvote					
EN01 Central Management and Services					
Minister's Salary	48	49	51	2	
Executive Management	1,331	1,492	1,708	216	1
Central Services	8,900	10,287	10,019	(268)	
Accommodation Services	4,916	5,180	5,046	(134)	
Subvote total	**15,195**	**17,008**	**16,824**	**(184)**	
EN06 Climate Change	**1,095**	**2,631**	**1,721**	**(910)**	2
EN07 Fish and Wildlife					
Fish and Wildlife Program	6,882	7,223	6,981	(242)	
Fish and Wildlife Development Fund	3,769	3,704	3,900	196	
Subvote total	**10,651**	**10,927**	**10,881**	**(46)**	
EN08 Compliance and Field Services	**17,584**	**17,513**	**17,443**	(70)	
EN09 Forest Services					
Forest Programs	6,389	6,824	6,094	(730)	3
Reforestation	1,695	1,940	1,342	(598)	4
Insect and Disease Control	2,108	1,846	1,111	(735)	5
Subvote total	**10,192**	**10,610**	**8,547**	(2,063)	
EN10 Wildfire Management					
Forest Fire Operations	125,781	50,011	52,238	4,704	6
Recoverable Fire Suppression Operations	616	1,700	2,164	464	7
Forest Fire Capital Projects	4,517	22,176	19,593	(2,583)	8
Subvote total	**130,914**	**73,887**	**73,995**	2,585	
EN11 Environmental Protection					
Environmental Protection Program	3,755	3,836	4,217	381	9
Environmental Assessment	1,127	1,168	1,160	(7)	
Compliance Audit	522	633	510	(123)	10
Technical Resources	3,328	2,486	2,340	(146)	
Beverage Container Collection and Recycling System	25,266	24,039	24,039	-	
Subvote total	**33,999**	**32,162**	**32,267**	105	
EN14 Environmental Support					
Strategic Planning and Performance Improvement	716	1,067	977	(90)	
Business Transformation	4,307	5,574	4,902	(672)	11
Data Management	865			-	
Client Services	841			-	
Subvote total	**6,729**	**6,641**	**5,879**	(762)	
EN15 Land					
Aboriginal Affairs	336	573	465	(108)	12
Lands	3,035	3,249	3,088	(161)	
Subvote total	**3,371**	**3,822**	**3,553**	(269)	
Total expenditures	**229,730**	**175,201**	**171,007**	(1,614)	
Capital assets acquisitions	(7,965)	(25,004)	(21,274)	3,730	13
Capital assets amortization	10,238	11,204	9,718	(1,536)	14
Non-spending control items	(4,415)		2,630	2,631	15
Total expense	**227,588**	**161,401**	**162,081**	3,211	

Explanation of major variances:

1. Operating expenses higher due to internal reorganization changes offset internally
2. Decrease due to contracts not going forward as anticipated
3. Operating expenses lower than anticipated
4. Under-expenditure from the stand tending program due to weather conditions
5. Tree removal contract funding reallocated
6. Fire season higher than expected; inventory adjustment net of internal savings
7. Increase in recoverable fire cost due to Fort McMurray, Alberta fire
8. Engineering and Consulting tenders and work timeframe longer than anticipated resulting in delayed work
9. Over-expenditure due largely to Husky Energy oil spill
10. Under-expenditures due to vacancy savings and expenditure restraint
11. Decrease due to a system write off and delays in system development
12. Under-expenditures due to vacancy savings and operational savings
13. Delays in capital projects
14 Delays in projects not being completed as originally anticipated resulting in less amortization
15. Non-spending control items including year-end adjustment to inventory

Actual funding provided for third-party transfers in 2016-17

Third-party funding 2016-17		
Amount ($000s)	**Recipient**	**Purpose**
24,039	Saskatchewan Association of Rehabilitation Centres	Operation of beverage container collection and recycling
3,900	Fish and Wildlife Development Fund	Operation of fund (30 per cent of revenues collected)
122	Saskatchewan Outfitters Association	Phase two implementation of industry-led outfitting commission
115	South of Divide Conservation Action Program Inc.	Habitat conservation activities for species at risk
70	University of Saskatchewan	Woodland Caribou Research
66	Saskatchewan Water Appeal Board	Operating grant
41	University of Saskatchewan	Canadian Cooperative Wildlife Health Centre - Disease Research
34	University of Alberta	Mixedwood Growth Model - calibration for black spruce
32	Canadian Council of Ministers of the Environment	Operation of business plan
20	University of British Columbia (UBC)	UBC wildfire program
19	FRI Research	Membership – FGrOW, Western Boreal Growth and Yield Association
18	Aggregate of grants under $4,000	Nine grants ranging from $300 to $3,500 • Ducks Unlimited (2) • Northern Saskatchewan Trappers Association (3) • Saskatchewan Association of Conservation Officers (3) • Saskatchewan Cooperative Fisheries Limited (2) • Saskatchewan Polytechnic - Integrated Resource Management and Resource Law (1) • Saskatchewan Trappers Association (1) • Saskatchewan Wildlife Federation (3) • Woodwater Consulting Inc. (1)
15	FP Innovations	Membership – Wildland Fire Operations Research (AC FIRE)
13	Canadian Council of Forest Ministers Secretariat	Operation of Canadian Council of Forest Ministers
13	University of Saskatchewan	Shorebird movement patterns and monitoring project
10	Beverly & Qamanirjuaq Caribou Management Board	Operation of Caribou Management Agreement
10	Saint Joseph's College	Science unit - bird study
10	University of British Columbia	Blue Sky program (fire/smoke model)
8	Saskatchewan Scrap Tire Corporation	Fire prevention work – Assiniboia Rubber Recycling Facility
7	Fur Institute of Canada	Operational capacity and program administration
5	Grasslands Air Zone Inc.	Air monitoring
5	Great Plains Air Zone Inc.	Air monitoring
5	Sturgeon River Plains Bison Stewards	Operation of the Sturgeon River Plains Management Plan
4	Canadian Institute of Forestry (CIF)	Access to education and training for ministry forestry staff
4	Wildlife Habitat Canada	Operation of Canadian Wildlife Directors Committee
28,585	**Total grants**	

Revenues

The majority of revenue collected by the Ministry of Environment relates to environmental handling charges, hunting and angling licence fees, forestry fees and dues, and transfers from other governments of recoverable fire suppression costs. These revenues are collected on behalf of the government and all revenue collected is deposited into the General Revenue Fund.

The ministry's budgeted revenue for 2016-17 was $54.9 million; actual revenue recorded was $61.4 million.

Description of revenue	2016-17 budget ($000s)	2016-17 actual ($000s)	2016-17 variance ($000s)	
Own-source revenue				
Other licences and permits	17,236	18,219	983	
Sales, services and service fees	25,389	25,665	276	
Interest, premiums, discount and exchange	34	218	184	1
Transfers from other governments	1,700	3,095	1,395	2
Other revenue	7,198	10,562	3,364	3
Transfers from the federal government	3,422	3,622	200	
Total revenue items	**54,979**	**61,381**	**6,402**	
Non-revenue items		19	19	
Total revenue items	**54,979**	**61,400**	**6,421**	

Explanation of variances:

1. Largely related to late billings and interest on a penalty
2. Recovery on wildfire incidents from the previous fiscal year
3. Increase due to Husky Energy billing, SaskPower carbon credit and recovery from the Water Security Agency

Other

Fish and Wildlife Development Fund

The Fish and Wildlife Development Fund (FWDF) is a special purpose fund the ministry uses to support habitat protection and management throughout the province. Revenues are transferred to the FWDF based on an amount equivalent to 30 per cent of habitat licence certificates and hunting, angling, and trapping licence fees the province collects. Basic expenditures relate to habitat protection through the purchase, management and enhancement of habitat.

In September 2014, the ministry signed a trust agreement with the Saskatchewan Wildlife Federation to transfer operation and maintenance of fisheries programming as the first phase of a transfer of the FWDF to independent agencies. On July 14, 2015, the ministry signed service agreements to transfer responsibility for the day-to-day management and acquisition of wildlife lands to the Saskatchewan Wildlife Federation, Ducks Unlimited Canada and Nature Conservancy of Canada.

The following table provides a summary of the budgeted and unaudited results of the FWDF for 2016-17.

Audited financial statements will be available at gov.sk.ca/finance under the publications section of their website.

(Based on unaudited figures)	2016-17 budget ($000s)	2016-17 actual ($000s)	2016-17 variance ($000s)	
Revenue	3,893	5,217	1,324	1
Expenses:				
Fish enhancement projects	1,341	1,388	47	
Wildlife habitat projects	1,051	1,342	291	2
Grants in lieu of taxes	300	303	3	
Total expenses	2,692	3,033	341	
Excess of revenue over expenses	1,201	2,184	983	

Explanation of variances:

1. Net result of higher licence sales than anticipated and additional revenue associated with the legislative change to transfer seven per cent of Crown land sales to the FWDF
2. Grants payments were higher than budgeted

Impacted Sites Fund

The Impacted Sites Fund was established on April 2, 2015 by *The Environmental Management and Protection Act, 2010*. The fund receives all revenue from fines and administrative penalties imposed in accordance with the act. Other revenues may include gifts, donations, grants or moneys appropriated by the legislature. The act permits expenditures from the fund to reclaim, restore and remedy orphaned environmentally impacted sites and to pay the expenses of administering the fund.

The following table provides a summary of the budgeted and unaudited results of the fund for 2016-17.

(Based on unaudited figures)	2016-17 budget ($000s)	2016-17 actual ($000s)	2016-17 variance ($000s)
Revenue	-	65	65
Expenses:			
Contracts	-	-	-
Grants	-	-	-
Total expenses	-	-	-
Excess of revenue over expenses	-	65	65

For More Information

The Ministry of Environment welcomes your comments and questions.

centre.inquiry@gov.sk.ca

Toll-free in North America 1-800-567-4224

3211 Albert Street, REGINA, SK S4S 5W6

This annual report is also available electronically at saskatchewan.ca/environment.

Appendix A

Organizational Chart

As of March 31, 2017

Appendix B

Administered Legislation 2016-17

The ministry derives its mandate, responsibilities and authority from a number of Acts and regulations under those Acts.

Acts currently assigned to the Minister of Environment are:

- *The Conservation Easements Act*
- *The Ecological Reserves Act*
- *The Environmental Assessment Act*
- *The Environmental Management and Protection Act, 2010* (EMPA 2010)
- *The Fisheries Act (Saskatchewan)*, 1994
- *The Forestry Professions*
- *The Forest Resources Management Act*
- *The Hunting, Fishing and Trapping Heritage Act*
- *The Natural Resources Act*
- *The Protection of the Wild Ponies of the Bronson Forest Act*
- *The Provincial Lands Act, 2016*
- *The Sale or Lease of Certain Lands Act*
- *The Water Appeal Board Act*
- *The Wildfire Act*
- *The Wildlife Act, 1998*
- *The Wildlife Habitat Protection Act*

Acts currently assigned to the Minister Responsible for the Water Security Agency are:

- *The Conservation and Development Act*
- *The Water Security Agency Act*
- *The Water Power Act*
- *The Watershed Associations Act*

New Acts that have received Royal Assent but are not yet in force:

- *The Management and Reduction of Greenhouse Gases Act*

Acts that were repealed in 2016-17

- *The Provincial Lands Act*

Acts that were amended in 2016-17

- *The Forest Resources Management Act*
- *The Forestry Professions Act*

Appendix C

Legislated Agencies, Boards and Committees

Beverly and Qamanirjuaq Caribou Management Board

- Beverly and Qamanirjuaq Caribou Management Agreement states, "The continued well-being of these herds requires coordinated management, goodwill and co-operation amongst governments and the traditional users of these caribou." It also recognizes, "a special relationship exists between the traditional user and the caribou, worth more than $15 million annually in subsistence value alone."
- The board is a co-operative recommending body comprised of aboriginal and government representatives from Saskatchewan, Manitoba, the North West Territories, Nunavut and the government of Canada.

Fisheries Advisory Committee

- This committee represents NGOs and stakeholders and provides recommendations to the ministry on matters pertaining to fish management.
- Committee members are appointed by the Minister annually.

Fish and Wildlife Development Fund Advisory Council

- The council will make recommendations to the Minister of Environment on matters respecting the annual work plan and expenditures from the FWDF.
- A focus will be on fish and wildlife habitat acquisition/management and species management.

Wildlife Advisory Committee

- This committee provides stakeholder perspective and advice to the ministry on matters pertaining to wildlife management.
- The members of the Wildlife Advisory Committee represent major stakeholders, including recreational hunters, landowners, outfitters, tourism interests, ranchers, trappers, conservation and Indigenous organizations.
- Committee members are appointed by the Minister annually.

Water Appeal Board

- This Board hears appeals from the decisions of the Water Security Agency made pursuant to the drainage complaint process in *The Water Security Agency Act.* (Formerly *The Saskatchewan Watershed Authority Act.)*

Saskatchewan Environmental Code Advisory Committee

- Established under the authority of *The Environmental Management and Protection Act, 2010.*
- The advisory committee acts as a formal forum for exchanging ideas, overseeing the development of the code and providing advice and guidance on the content of the code and supporting materials.
- The advisory committee members represent a wide diversity of industry and stakeholders. They are appointed by Order in Council for a three-year term.

Appendix D

Publications Released by the Ministry

For the period of April 1, 2016 - March, 31, 2017

- 2015-16 Environment Annual Report
- 2015-16 Environment Plan
- 2017 State of the Environment Report
- Using Wood Burning Stoves and Appliances Fact Sheet
- Saskatchewan and the Global Climate Change Challenge Fact Sheet
- Aquatic Invasive Species (AIS) poster
- Aquatic Invasive Species Lure Card
- Aquatic Invasive Species Fact Sheet
- 2016 Fish Facts
- 2016 Stocked Waters Guide
- 2017 Anglers' Guide
- 2017 Anglers' Guide – French
- 2016 Hunters' and Trappers' Guide
- 2016 Hunters' and Trappers' Guide – French
- 2016 Spring Bear Supplement
- 2016 Snow Goose Supplement
- 2016 Saskatchewan Resident Big Game Draw Overview
- 2016 Canadian Resident White-tailed Deer Draw Overview
- 2016 Hunting, Angling and Trapping Licensing (HAL) System Fact Sheet
- Winter Weather Watcher Program Resource Booklet
- Saskatchewan's Beverage Container Recycling Program Fact Sheet
- Amendments to the Environmental Management and Protection Act Regulations Fact Sheet
- Fish and Wildlife Diseases in Saskatchewan fact sheet
- Problem Wildlife fact sheets (bears, wolves, cougars)
- Saskatchewan Wild Fur Harvest and Cash Values 2016-17
- Husky-Maidstone Oil Spill Fact Sheet
- Waste Electronic Equipment Stewardship Regulations Fact Sheet
- Health and Environmental Effects of Open Burning of Refuse and Other Solid Wastes Fact Sheet
- Starting a Regional Waste Management System Fact Sheet
- 2016 Saskatchewan Pilot's Handbook
- 2017 Wildfire Safety Calendar